

This is a bit off subject, though necessary, and I hope our Moderator will tolerate it.

Originally posted by Pearlman:

Given the number of years Ali has invested in his theory ...

Robert does not say, or know, how many years. I had read, and heard, it from others that Challenger has been such an obsession that I did nothing but generate theory after theory. You see shades of this in Hansen's first post, e.g., *"AbuTaha's second failure scenario turned out to be much tougher for the NASA and MTI engineers to put to bed for years after the accident."* Maybe others were busy for years with my Challenger work, I wasn't. The "dynamic overshoot" analysis was done, and handed over to NASA, in October 1986 – 4 months after I purchased the Commission report. My "sequence of events," including the extensive photographic evidence, was completed by mid-'87 – 8 months after that work began. Dynamic overshoot was revived in 1990-92 only because the problem *"turned out to be much tougher"* for others, as Hansen writes. Even in Tim's chapter, I have been forever the Challenger man. As you will see from the works I accomplished since 1986 (described below), the Challenger work was a distraction rather than constant preoccupation. If I only list my works by title, the hecklers will say, "A certifiable crank." To beat them to it, I'll give some details.

I measure the difficulty of a job by the mathematical analysis required, and such analysis is not done on a keyboard or in a month or, sometimes, years. Here is a list of my works since 1986, which just happen to fall in sequence of mathematical difficulty: From simple to difficult to very difficult to extremely difficult to what has been dubbed by great thinkers through the ages as "impossible to do."

1. **"Challenger Investigation"** (1986-87 and 90-92). The start-up transient dynamic overshoot problem in the Shuttle was straightforward, primarily because I did that type of work in detail in 1970-72, including specific analysis that I did for Comsat Labs for the Apollo 13 incident in 1970. The photo evidence was an intellectual diversion.
2. **"Cold Fusion"** (1989-91). In 1989, the world was shocked to hear of nuclear fusion at room temperature – cold fusion. I am not a nuclear physicist and I wouldn't in my wildest dreams think to get involved. As the story developed, I noticed that the inventors reported releasing 4MJ/cc (4 million joules energy per cubic centimeter) from palladium dipped in deuterium (heavy hydrogen). In the early 1970s, I investigated the failure of nickel-hydrogen fuel cells. I did extensive research and identified hydrogen embrittlement as the culprit. Veteran pilots may remember aircraft wings falling off in hangers – Hydrogen attacking titanium (same family as palladium). You put heavy hydrogen and palladium together and you are apt to ignite a storm, which I called, to the dislike of physicists, rapid rusting.

The trick was to calculate the energy content in a cubic centimeter of palladium, or other metals. It wasn't easy, but as it turned out, we need more than 10MJ to form 1cc of palladium from the ore – by melting. While the inventors were telling the Congress and the world that they could get 1000% return on investment, I showed that we only recover part of the energy that we put into the metal in the first place, when we melt it. Previous NASA references were vital to the work.

To make a long story short, see my two papers on the subject published in the MIT Journal of Fusion Energy; respectively, Cold Fusion – The Heat Mechanism, *J. Fusion Energy*, **9**, Sep. 1990, 345, and Cold Fusion – Engineering Perspectives, *J. Fusion Energy*, **9**, Dec 1990, 391. The first paper, “Cold Fusion – The Heat Mechanism” was invited for publication by the world renowned Journal, Nature. I opted to publish both papers together in an American Journal. More people read Nature than JFE and that’s probably why not many heard of that work.

3. **“Pulsing Thrust”** (1990-93).

In the midst of the shouts about whether the “dynamic overshoot” blunder made its way into Shuttle design or not, someone (for credit, I’ll get his name from my old notes) from the Office of Vice President Dan Quayle asked me point blank if any of my theories could be turned into useful application(s). I was stunned, as I always detested engineers crying out about problems but not providing solutions. My “pulsing thrust” invention was mentioned in previous posts. The letters about my invention from NASA, major (Shuttle) contractors and others were blunders of historic proportion. Robert suggested releasing the overly polite rejection letters in full. I think it more appropriate to release these letters in full.

Though it has not been mentioned by anyone here, or elsewhere, I’ll say it myself. My invention had shown that the most sacred law (theory) of energy conservation may be wrong and may require modification. This is the big story and no one mentioned it when writing about my invention.

For the record, when I finished the grueling mathematics and physics of the invention, I called the Office of the Vice President (same telephone number) to follow up. The Administration had changed. It turned out that the previous Administration took their files with them and the new filing cabinets did not have anything on my invention. Go figure. I wasn’t going to spend another 3-year exhausting and expensive campaign to convince the Office of Vice President Al Gore to follow up on my invention, though Mr. Gore had responded to my “dynamic overshoot” work when he was in the Senate.

4. **“The Cause of Gravity and Formulas of the Unified Interaction”** (1993-95)

In 1993, the First Secretary in the Royal Embassy of Saudi Arabia, who was familiar with my engineering work since the 1970s, invited me to debut a series of lectures on science and technology at the Embassy in Washington DC. He wanted something new, something unique. I mounted another massive effort that had actually begun decades before. I prepared the Lecture and a lengthy report, with the required mathematics. I think that by then, Spencer *et al.* were tap dancing on the net about my Challenger work and me. My name was going downhill very fast and my Lecture was canceled.

In brief, the theories of gravitation of Newton and Einstein have led to an invisible universe. NASA and others keep finding things that we cannot see in the universe, e.g., black holes. With black holes, dark

matter and, now, dark energy over 90% of the universe we see is not there. But, it is there. My theory fixes that problem – and more.

5. **“Method for Producing Natural Motions”** (1980s-Present)

After doing hundreds of thousands of tests (actually counted), I applied for a patent with the title, “Method for Producing Natural Motions” on December 30, 1997. You can find the Patent on the USPTO site, with the above Title as follows: Patent No. 6,826,449, Date of Patent Nov. 30, 2004. I hope you don't mind me giving the “Abstract” of the invention:

“A method to produce natural motions, or self-motion, of animate or inanimate bodies or their parts by the application of pulses at two or more locations on the surface, or inside, of the bodies or their parts. Turn on the pulses, and motion results instantly. The mechanism can emulate living motions, and as living motions can take on infinite gaits and forms, so can the mechanism produce infinite forms of motion. Smooth, repeatable, controllable or random motions can be induced. Just as living muscles convert the pulses from the nervous system into natural motion in one step, so will the mechanism convert artificially generated pulse-trains into motion in one step. The dynamic coupling or modulation of waves which travel within a body, and which are caused by artificially generated pulse-trains, produces the desired motions in directions perpendicular to the plane of the pulses. Changing the number of pulse-trains, the frequency and/or the amplitude of the pulses, or other parameters, can vary the speed, gait or form of the motion induced by the pulsing method. The moving bodies can be made to turn sideways, at 90 degrees, or at any other angle.”

I am the first, and perhaps still the only, person to induce his or her body to move mechanically with the above invention, i.e., I substituted mechanical for the nervous pulses to move my body. I also induced, and stopped, motion disorder disease-like motions in my arms; and I produced hundreds of motion models, some of which were built for DARPA under contract.

Where is the invention – in the market? Remember I died, and was revived, two weeks before the Patent issued. All plans went down the drain as I was confined to bed. Anyway, if you have seen models that move without wheels, gears, pulleys, clutches and the like by DARPA, other agencies or companies, that's my invention. And if you have heard of failed attempts to fly with some ingenious devices like flying saucers, that's experts trying to expand on my invention without first understanding it.

6. **“Instauration of Science, Engineering, Mathematics and Philosophy”** (2004-Present).

Confined to bed, I completed another major work that had waited since the 1950s – above Title. Hansen (*history of engineering*) and many others will love this one. It will alter the foundation of the knowledge developed since Plato and Aristotle.

In addition to my Challenger and Anatomy of Failure Mechanisms courses mentioned before, I also prepared and gave other courses at home and abroad,

e.g., spacecraft structural design, at Aeritalia in Italy in 1988; and I provided services in the investigation of accidents and other industrial services since 1986. There were other important works, but I don't even remember them now. In short, I haven't been obsessed with the Challenger.

Originally posted by Robert:

There must be a reason why you cannot submit your paper(s) for publication in a peer reviewed or engineering journal.

The above list gives more than "*a reason*." I have a long list of papers to finish before I'd even think about Challenger-related papers. I hope my posts here have been clear, informative and useful.

Inadvertently this thread has turned into a discussion about a book that isn't, mine. After experiences with agents, publishers, attorneys, prominent aerospace educators for co-authors and others, I am convinced that my Challenger work will not be published in the normal way. I don't believe in self-publishing. No one has published my pictures with cogent description of events. It's not an easy task, as you might have noted from my posts. I still think today, as I did 21 years ago, that my Challenger work can only appear as a government sanctioned, or sponsored, product. Perhaps, my 1986-87 attempts to the same end will make sense to many of you now.

As an educator, I feel obligated to make valuable information available to others, particularly young people who might be inspired to do greater things in their lives and the lives of others. It is in that spirit that I took the time to prepare the lengthy posts, and to give a synopsis, answer questions, post photos and specific challenges, and defend myself against thoughtless attacks. As you can see from the above list of works, I really must return to work soon. But I look forward to post relevant messages and answer questions.

Go Endeavour. Great mission. Safe return.

Ali AbuTaha